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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09,916,671	07/26/2001	Deborah Tung	MGP.P.US0079	3444

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EXAMINER

YOON, TAE H

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 02/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/96,671

Applicant(s)

Tung et al

Examiner

T. Yoon

Group Art Unit

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— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 1-29-03
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-44 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 20-29 is/are allowed.
- ☒ Claim(s) 1-14, 16-19 and 30-44 is/are rejected.
- ☒ Claim(s) 15 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 8
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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This application is examined under amended 35 USC 102(e) since it was filed on or after November 29, 2000.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-14, 16-19, 30-38 and 40-44 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Venkateshwaran et al (US 5,885,481).

Venkateshwaran et al oxygen-scavenging composition comprising metals such as iron particles having particle sizes of at least 50 mesh (297 microns) or smaller at col. 4, lines 31-45 and col. 7, lines 3-28 wherein a masterbatch is taught also. Said particle sizes of at least 50 mesh (297 microns) or smaller encompass the instant particle sizes of larger than 25 microns or 25-70 microns Examples show a dry-mixing of iron powder and sodium bisulfate which meets the

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instant pre-treatment. Polyester is one of the preferred thermoplastic (col. 6, lines 4-18 and col. 8, lines 1-6).

Thus, the instant invention lacks novelty.

Claims 1-5, 7-14, 16-19, 30-38 and 40-44 are rejected under 35 U.S.C. 103(a) as obvious over Venkateshwaran et al (US 5,885,481) alone, or in view of Yamaji et al (US 4,230,595).

The instant invention encompasses particle sizes of larger than 25 microns or 25-70 microns since the amount of particles having a particle size of less than about 25 microns can be zero. Yamaji et al teach an oxygen scavenger of metallic iron having a particle size of not more than 150 microns at col. 4, lines 6-12.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize particle sizes of larger than 25 microns or 25-70 microns in Venkateshwaran et al with or without teaching of Yamaji et al since Venkateshwaran et al teach a particle size of 297 microns or smaller and since the use of iron powders having a particle size of not more than 150 microns is well known absent showing the criticality of the recited particle sizes, Comparison must be based on the closest prior art, and not on applicant's own choice.

Claims 1-4, 6, 10, 11, 34, 36, 37, 39 and 42-44 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nichols (US 5,008,230).

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Rejection is maintained for reason of record and following.

Catalysts of metal salts and amines are inherent oxygen-scavenging particles and applicant failed to show otherwise.

Claims 1-4, 6-11, 34, 36, 37 and 39-44 are rejected under 35 U.S.C. 103(a) as obvious over Nichols (US 5,008,230) in view of Venkateshwaran et al (US 5,885,481) or Blinka et al (US 6,365,245).

Note that Venkateshwaran et al (col. 4, lines 38-40) and Blinka et al (col. 3, lines 28-35 and 58 to col. 4, line 7) support the examiner's position that catalysts of metal salts and amines taught by Nichols are inherent oxygen-scavenging particles.

The instant invention further recites particle sizes of larger than 25 microns or 25-70 microns since the amount of particles having a particle size of less than about 25 microns can be zero.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize particle sizes of larger than 25 microns or 25-70 microns in Nichols since catalysts of metal salts and amines are commercially available in micronized form absent showing the criticality of the recited particle sizes, and Venkateshwaran et al and Blinka et al teach that catalysts of metal salts and amines taught by Nichols are oxygen-scavenging particles. Comparison must be based on the closest prior art, and not on applicant's own choice.

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Claims 1-4, 6, 11, 17, 34, 36, 37, 39, 43 and 44 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Konagaya et al (US 5,434,000).

Konagaya et al teach a polyester composition containing about 100 ppm of antimony trioxide and magnesium acetate at col. 7, lines 6-19. Either case such as a particle size of said antimony (trioxide) and magnesium (acetate) is smaller than 25 microns or larger than 25 microns meets the instant invention. Thus, the instant invention lacks novelty.

Claims 1-4, 6, 11, 30-34, 36, 37, 39, 43 and 44 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kriesche et al (US 5,565,545).

Rejection is maintained for reson of record and following.

Elemental metals such as Sb and Ge are insoluble in the polyester even though antimony trioxide, antimony triacetate and germanium dioxide is soluble in it. Of course, salts such as antimony triacetate would be soluble, but Sb is present as a particle inherently. Catalysts of metal salts are inherent oxygen-scavenging particles and applicant failed to show otherwise.

Claims 1-4, 6, 11, 30-34, 36, 37, 39, 43 and 44 under 35 U.S.C. 103(a) as obvious over Kriesche et al (US 5,565,545) in view of Venkateshwaran et al (US 5,885,481), Blinka et al (US 6,365,245).

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Note that Venkateshwaran et al (col. 4, lines 38-40) and Blinka et al (col. 3, lines 28-35 and 58 to col. 4, line 7) support the examiner's position that catalysts of a metal salt taught by Kriesche et al are inherent oxygen-scavenging particles.

The instant invention further recites particle sizes of larger than 25 microns or 25-70 microns since the amount of particles having a particle size of less than about 25 microns can be zero.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize particle sizes of larger than 25 microns or 25-70 microns in Nichols since catalysts of metal salts and amines are commercially available in micronized form absent showing the criticality of the recited particle sizes, and Venkateshwaran et al and Blinka et al teach that catalysts of metal salts and amines taught by Nichols are oxygen-scavenging particles. Comparison must be based on the closest prior art, and not on applicant's own choice.

Claims 1-4, 6-9, 11, 30-37, 39-41, 43 and 44 are rejected under 35 U.S.C. 103(a) as obvious over Tindale (US 5,419,936) and Antimony powder of Aldrich Chemical Catalog (page 122, 1988).

Note that claims 20-29 have not been rejected.

Tindale teaches polyester resins containing Sb in table 1 wherein low haze values are seen. Masterbatch method is taught at col. 3, lines 11-16. Even though haze values for sample numbers

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7-11 are not shown in said table, it is expected to have low haze values since Tindale teaches the amount of metal particles being 3-300 ppm at col. 3.

The instant invention further recites particle sizes of larger than 25 microns or 25-70 microns since the amount of particles having a particle size of less than about 25 microns can be zero. Aldrich Chemical Catalog shows commercial antimony powder having a particle size of about 100 mesh (149 microns or smaller), and antimony oxide powder thereof would have a particle size larger than said about 100 mesh.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize particle sizes of larger than 25 microns or 25-70 microns in Tindale since catalysts of metal oxides are commercially available in micronized form as evidenced by Aldrich Chemical Catalog absent showing the criticality of the recited particle sizes.

Comparison must be based on the closest prior art, and not on applicant's own choice.

Claims 1-4, 6, 11, 30-34, 36, 37, 39, 43 and 44 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pengilly (US 4,535,118).

Rejection is maintained for reason of record and following.

Catalysts of metal salts and chloride are inherent oxygen-scavenging particles and have the particle size larger than 25 microns, and applicant failed to show otherwise.

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Claims 1-4, 6-9, 11, 30-34, 36, 37, 39-41, 43 and 44 are under 35 U.S.C. 103(a) as obvious over Pengilly (US 4,535,118) in view of Antimony powder of Aldrich Chemical Catalog (page 122, 1988) and Venkateshwaran et al (US 5,885,481) or Blinka et al (US 6,365,245).

Note that Venkateshwaran et al (col. 4, lines 38-40) and Blinka et al (col. 3, lines 28-35 and 58 to col. 4, line 7) support the examiner's position that catalysts of metal salts and chloride taught by Pengilly are inherent oxygen-scavenging particles.

The instant invention further recites particle sizes of larger than 25 microns or 25-70 microns since the amount of particles having a particle size of less than about 25 microns can be zero. Aldrich Chemical Catalog shows commercial antimony powder having a particle size of about 100 mesh (149 microns or smaller), and antimony oxide powder thereof would have a particle size larger than said about 100 mesh.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize particle sizes of larger than 25 microns or 25-70 microns in Tindale since catalysts of metal oxides are commercially available in micronized form as evidenced by Aldrich Chemical Catalog absent showing the criticality of the recited particle sizes, and Venkateshwaran et al and Blinka et al teach that catalysts of metal salts and amines taught by Tindale are oxygen-scavenging particles. Comparison must be based on the closest prior art, and not on applicant's own choice.

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Claims 20-29 reciting 50-2500 ppm of iron particles in polyester are allowed

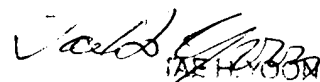
Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

THY/February 19, 2003


TAE H. YOON
EXAMINER